In-Car TV Tuner

Digital (DVB-T) TV Tuner for BMW IBUS

MCA-DVBT-TV-01 User Manual

MURA CAR ACCESSORIES

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Overview

Thank you for purchasing Mura Car Accessories TV Tuner. Our product is designed for vehicles operating on the BMW I-BUS protocol. Providing complete integration with OEM car head unit, MCA-DVBT-TV-01 offers an easy to control bult-in digital (DVB-T) HD TV tuner along with a multimedia interface, allowing you to view and record your favorite TV shows when you are on the road.

Features

- High definition video output directly on existing car monitor screen
- Can be operated from existing car controls or by IR remote control
- Able to receive SD as well as HD broadcast
- USB host interface allows you to record streams on or view audio/video content from a memory stick
- Support for Rear View Backup camera

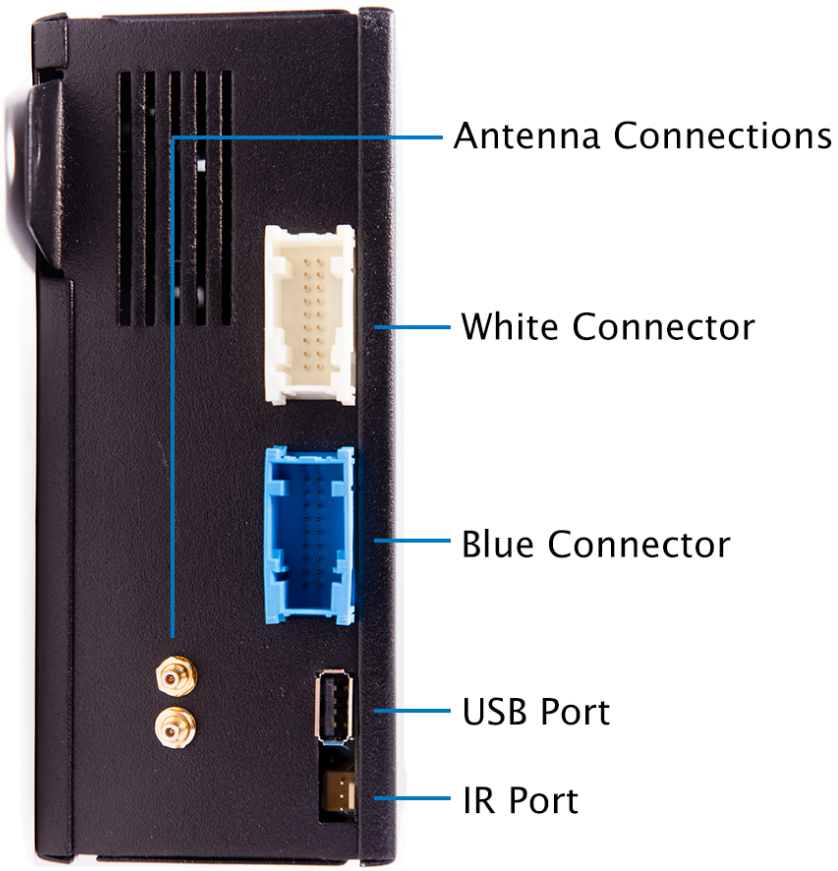
Package Contents

This package contains:

- 1 x MCA-DVBT-TV-01
- 1 x User Manual
- 1 x Remote Control
- 1 x IR cable (5m) with sensor
- 1 x USB cable (1.5 m)

Hardware

Rear Panel View



Port	Connection
Blue connector	Connects to car's blue connector
White connector	Connects to car's white connector

	USB port	Connect USB data stick or extender cable for data stick
	IR port	IR cable from present package
	Antenna connectors	Connects to OEM car antenna connections

All TV module functions can be accessed using both remote control and OEM BMW bordmonitor controls (similar to your old analogue TV module).

Using IR Remote Control

AUDIO – Select Audio stream if multiple options available
FAST SCAN – Fast (auto) search for stations
EPG – Electronic TV guide
SUBTITLE – Select subtitles stream if multiple available
VOL–/VOL+ Increase/Decrease volume
LIST – Display list of available programs
CH+/CH– Previous/Next channel
TXT – Teletext

Using Board Monitor Display to Control TV functions

BMW Car Monitor key mappings

Installation

MCA-DVBT-TV-01 is designed to replace your old, analog TV Tuner. Therefore, it makes use of existing setup which is assumed to have been put in place when you had your analog tuner installed. If this is not your case and this is your first TV tuner, installation will take additional steps for which external documentation should be available from your car manufacturer.

Installation overview

- If you already have an installed TV tuner (an old analogue TV tuner for example), installing MCA-DVBT-TV-01 is a simple plug and play procedure.
- If this if the first TV module for your car, installation is similar to retrofitting an original TV tuner. We recommend you to follow the steps in the BMW retrofit documentation for your particular car model.

Replacing existing TV module with MCA-DVBT-TV-01

- Wait for navigation to shut down (for led to turn off). Depending on your car equipment, it should take around 1-5 min
- Disconnect the negative terminal of the car battery
- Remove the old TV module and put the MCA-DVBT-TV-01 in its place
- Connect the white and blue car cable connectors to corresponding connectors on MCA-DVBT-TV-01 panel
- Connect car antennae to corresponding connectors on MCA-DVBT-TV-01 panel
- If you wish to control the TV tuner via remote control, connect supplied IR cable to IR connector on MCA-DVBT-TV-01 and route IR cable so that the receiver ends up in a location that is most

convenient to you. You will need to be able to point the remote control towards this receiver.

- Connect USB cable to the USB port on MCA-DVBT-TV-01 and route the other end of the cable to a convenient position for when you want to use a USB stick
- Installation is now over. Reconnect the car battery.

The location where you can find your old TV tuner depends on your car model.

Software

MCA-DVBT-TV-01 announces itself to the car computer (just like the OEM analog TV tuner). This means that you will find it in the navigation System Menu, under the name 'Television'. The first time you access it after installation, you will be taken to an 'Installation Guide' which allows you to set OSD Language (menu language), Country and to search for available channels. After you perform the channel search, you can start enjoying digital TV in your car.

OSD Operation

Menu	Sub Menu	Description
Program	Program Edit EPG Sort LCN	
Picture	Aspect Ratio TV Format	e.g. 16:9, 4:3
Channel Search	Auto Search Manual Search Country Antenna Power	Automatic scan for channels Manual scan for channels
Time	Time Offset Country Region Time Zone	If set to 'Auto' there is no need to worry about the other features in this sub-menu
Option	OSD Language Subtitle Language Audio Language Digital Audio	Sets menu language If multiple options available, sel. lang. for subtitle and audio N/A (BMW audio is all analog)
System	-	Present version of TV tuner does not make use of 'System' functions.
USB	Multimedia Photo Configure Movie Configure PVR Configure	
USB → Multimedia	Music Photo Movie PVR	Access to Music, Photo and Movie folders on your memory stick Access to streams recorded using MCA-DVBT-TV-01

Using OEM board monitor for menu navigation and control

The following instructions refer to controls described in section “Using Board Monitor Display to Control TV functions” on page 6. Mind that the names by which we refer to them differ from what appears on your board monitor, so please use the above mentioned picture to guide your through the following steps.

- Press **Menu** to enter and **Exit** to exit the menu
- Navigate by using left/right arrows
- Select desired submenu by pressing rotary button
- Navigate submenu by means of rotary button
- Once you get to desired option, change value by pressing left/right arrows

The following apply to USB Multimedia submenu only:
General controls:

- Hierarchical folder structure. Press rotary button to view folder contents.
- Once you get to the desired file, select it by pressing rotary button
- By default, audio/video file plays in preview mode. For full-screen mode, press **Fav**/**Red**.
- When viewing self recorded video streams, press **Pause**/**Blue** to pause

Start/Stop Recording:

- Press **Record Tv** and recording starts.
- While recording a channel, you can switch to watching programs, provided they are from the same transponder
- If you try to navigate outside current transponder, you will not be allowed to continue navigation (Screen goes black and the text 'Recording' is displayed). Navigate back to previous channels.
- End recording by first navigating back to the program you are recording and then pressing **Exit**. The recording will then be saved to on your USB stick.

Delete recording:

- Navigate to the desired file
- Press **Pause/Blue**
- Confirm deletion by pressing the rotary button

Using remote control for menu navigation and control

Menu navigating and control of TV tuner by means of remote control is intuitive due to remote control being design for this tuner. If you encounter problems, please use the address at the end of this file for contacting our customer support.

Advanced Configuration Menu

To access the advanced configuration menu, switch to TV mode, then long press **SEL(ECT)** button. It allows the following settings to be made:

- TV motion: switch to **ON** if you want video output enabled while driving.
- CAM mode: **PAL** / **NTSC** / **OFF.** Choose whichever corresponds to your rear view camera type.
- AUX Mode: switch to **ON** as a first step in enabling stereo audio.
- SW and HW refer to Software and Hardware version of your module. This information will be asked when you contact customer support.

Mura Digital TV Tuner features stereo audio output.

To be able to use this feature, you need to have a BM54 radio module with AUX input.

The procedure to enable this feature is not so straightforward, due to the fact that audio TV input on BMW OEM radio modules is mono. Consequently, hardware modifications need to be made. These consist of pins re-routing and/or additional wiring. For instructions on this process, please contact us by sending an email to contact@mca.electricmura.ro or through our website, http://mca.electricmura.ro.

After performing the necessary hardware modifications, the feature must be enabled through the following software configurations. First set AUX Mode to **ON** (see instructions above). Back to the menu of your navigation, press **MODE** and then select AUX. Next, enter TV mode, then long press Tape Reverse button on your navigation's controls. At this point, your navigation switches to Auxiliary input (stereo).

Specifications

- Full compliance with HD DVB-T MPEG2/MPEG4 AVC/H.264 Standard
- High Doppler effect correction
- On screen channel information
- OSD Teletext (DVB ETS 300 706) and subtitle function support (EU model)
- VBI Teletext support (EU model)
- Fast scan for high speed driving and cross difference area

Supported video and audio formats for playing from USB stick:

- Video: RMVB, RM, Sorenson H.263, H.264, MPEG-1,2,4, VC1, Divx, Xvid, AVS, JPEG
- Audio: MP2,MP3,AC3,LPCM,ADPCM,AAC,HEAAC,WMA
- Remark: Some formats need license (for example: Dvix, RMVB, AC3)

Receiving frequency range:

- UHF 470MHz ~ 862MHz;
- VHF 174MHz ~ 230MHz

RF Input level: 81dBm ~ -20dBm
RF Input connector: SMB terminal x2
Antenna power: 12V

Technical Support

MCA is committed to offering quality products, as well as quality information. If you need help with your product, please contact our customer support at http://mca.electricmura.ro.

Warranty Information

This product is backed by a one-year warranty. In addition, MCA warrants its products against defects in materials and workmanship for

the period noted following the initial date of purchase. During this period, the product may be returned for repair or replacement with an equivalent product. The warranty covers parts and labor costs only. MCA does not warrant its products from defects or damage arising from misuse, abuse, alteration or normal wear and tear.